Red-legged frog at home in Lab and Site 300 habitats

Editor's note: This column inaugurates a new monthly feature by Laboratory wildlife biologists about wildlife at the Lab and Site 300.

California red-legged frogs may be found in most wetland habitats at the Laboratory and Site 300.

The California red-legged frog (Rana aurora draytonii) historically ranged from Marin County inland to Shasta County and southward to Northwest Baja California. Documented throughout 46 counties, the red-legged frog is now extinct in at least 24 of these, and as a result, received federal protection in 1996 as a "threatened species" under the Endangered Species Act.

Metamorphosis, an important milestone in its transformation from tadpole to frog, occurs in July and August. Egg masses (far left) of a few hundred to thousands eggs laid in February-March have spent the last several months developing through the risky tadpole period (second from left). The tadpole period is thought to be the stage of development in which the highest mortality occurs.

In July, metamorphosis (second from right) has begun; front and rear legs have formed and developed, and the tail, which has been so important for mobility over the last few aquatic months, is now being absorbed into the body. When the tail is completely absorbed the tadpole is considered a frog.

LLNL's wild side

Article and photos by Michael G. van Hattem

As a native species, red-legged frogs have evolved and adapted to the Mediterranean climate of California, completing metamorphosis in early summer before wetlands dry out. To avoid the danger of drying out, red-legged frogs can disperse into upland habitats and seek refuge in California ground squirrel (Spermophilus beecheyi) burrows, riparian areas or other wetlands. Frogs have been documented moving up to two miles in just a few days.

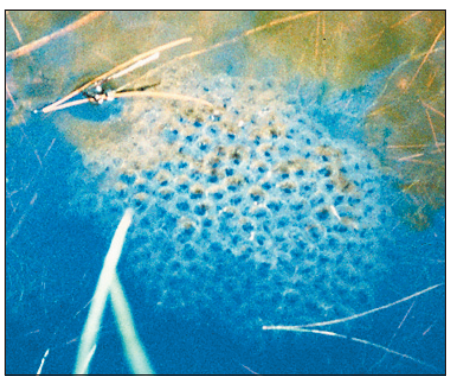
The diet of the California red-legged frog is highly variable; as larvae, these frogs are thought to be algal grazers, and as they develop into frogs their diet shifts toward invertebrates and small vertebrates such as Pacific tree frogs (Hyla regilla) and California mice (Peromyscus californicus). California red-legged frogs are California's largest native frog, attain sexual maturity at 2-3 years of age and may live 8-10 years, although the average life span is probably less.

A number of human influences threaten the survival of the California red-legged frog including loss of wetlands, use of pesticides and introduction of non-native species such as the bullfrog (Rana catesbeiana). Although threats to remaining populations vary geographically, introduced aquatic predators constitute the most significant threat to remaining populations within suitable habitat.

The U.S. Fish and Wildlife Service considers the Tri-Valley and surrounding foothills a "Key Area" for conservation because the California red-legged frogs can still be found in decent numbers compared with the rest of California.

Lab policy and federal law protect the California red-legged frog. You can help the California red-legged frog by avoiding impacts to wetland areas and not releasing any pets or other wildlife into ponds and streams. Contact the Environmental Protection Department's wildlife biologists if you encounter a frog at either of the sites.

For questions or additional information about this article, contact wildlife biologist Michael G. van Hattem at 4-6795.



Red-legged frog egg masses

Red-legged frog tadpole

Metamorphosis of tadpole to frog

Adult red-legged frog